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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
AIR, NOISE AND RADIATIONMEMORANDUM

SUBJECT: Restatement of Guidance on Emissions Associated with Soot-blowing

FROM: Kathleen M. Bennett *Kathleen M. Bennett*
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TO: Directors, Air & Waste Management Divisions
Regions I-IV, VI-VIII, X

Directors, Air Management Divisions
Regions V and IX

This memorandum restates EPA's guidance on emissions associated with soot-blowing as it relates to sources under New Source Performance Standards (NSPS) Subparts D and Da and State Implementation Plans (SIPs). Soot-blowers remove ash adhering to heat transfer surfaces in boilers. In new and larger boilers subject to Subparts D and Da, automatic, semicontinuous soot-blowers are used; while in smaller and older boilers subject to the SIP's, periodic soot-blowing is the dominant practice.

As required in 40 CFR 60.8(c), "performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility." Since soot-blowing occurs at regular intervals for each generator, these emissions cannot be discarded as being a result of an upset condition.

Recent data obtained for periodic soot-blowing for smaller pulverized and spreader stoker boilers show that uncontrolled emissions increase significantly during soot-blowing, while emissions controlled to levels of $0.1 \text{ lb}/10^6 \text{ btu}$ or less by fabric filters and scrubbers are unaffected by soot-blowing. This would indicate that the fraction of very fine particles is relatively unaffected by soot-blowing and that other control devices such as "cold side" electrostatic precipitators should be unaffected, while less efficient systems such as mechanical collectors may be affected.

For a source which blows soot on a semi-continuous basis, emissions can be adequately represented by three sampling runs.

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For units which do not blow soot semi-continuously, data suggest that the source's ability to comply using fabric filters, high-energy scrubbers, and medium to high efficiency "cold side" ESP's commonly used to meet design emission levels comparable to Subparts D or Da should not be adversely affected by the inclusion of soot-blowing. Testing should thus be done in accordance with previous guidance issued by DSSE. A copy of this guidance, dated March 6, 1979 and sent to all Regions, is attached for your information.

Relative to SIP limits, demonstrations of attainment and maintenance of National Ambient Air Quality Standards (NAAQS) are normally based upon continuously achieving the emission levels prescribed in State Implementation Plans, and the compliance determinations should be based upon the performance of control devices over the normal range of boiler operation. For fabric filters, electrostatic precipitators, and wet scrubbers, the most stringent test of their performance occurs at maximum boiler load. For mechanical collectors, the most stringent test occurs at low boiler loads. Therefore, it is recommended that SIP compliance tests be made at both high and low loads, and include soot-blowing per the March 6, 1979 guidance.

The attached March 12, 1979 guidance noted that it is appropriate to interpret a never-to-exceed emission limit as requiring control of soot-blowing emissions. This assumes that the individual SIP does not specifically address the issue of soot-blowing. If soot-blowing provisions are included in the SIP, these SIP provisions will, of course, take precedence; if provisions are not included, existing sources should be handled using the same approach as the attached March 6, 1979 determination provides for handling new sources. (Of course, inclusion of provisions in SIPs which provide exemptions in the mass standard for soot-blowing presupposes a demonstration that such exceptions will not interfere with the attainment and maintenance of NAAQS.)

Sources which are in violation of emission limits during soot-blowing operations and have not been exempted by the applicable SIP provisions should be treated as violating sources in accordance with other guidance. (See, for example, the definition of a "significant violator" in my memorandum of December 29, 1981 entitled "EPA Accountability System--OANR Policy Guidance.")

Should you have any questions, please contact this office.

Attachments